When quantifiers agree in person: Anomalous agreement in Bantu*

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The distribution of person, number, and gender features across languages follows certain cross-linguistic tendencies; one such tendency is that person agreement is often reserved for agreement between a noun and verb. Certain Bantu languages, however, reject this tendency by allowing person agreement on post-nominal quantifiers. The current analysis accounts for this seemingly anomalous case of agreement by tying the historical evolution of agreement morphology with the observation that these seemingly anomalous quantifiers have certain structural parallels with verb phrases.

1 Introduction

Across languages, parts of speech differ with respect to the kinds of agreement features they can show. Broadly speaking, verbs are generally the only categories that show person agreement. Stassen (1997) states this as follows:

(1) **The Agreement Universal**
     If a language has person agreement in intransitive main clauses, this agreement will at least be used in sentences with event predicates [i.e. verbs, KJ]

Put another way, verbs generally show agreement in person, number, and gender, while adjectives generally show agreement in number and gender to the exclusion of person. Kinyarwanda, a Bantu language spoken in Rwanda, displays both forms of agreement:[1]

(2) a. *Njye <u>n</u>-a-som-aga   igi-tabo.*
         1.SG 1.SG-PST-read-IMP CL7-book

         'I was reading the book.'

   b. *Wowe w-a-som-aga   igi-tabo.*
      2.SG 2.SG-PST-read-IMP CL7-book

      'You were reading the book.'

(3) *Umw-ana mu-gufi... / Ab-ana   ba-gufi...*
     CL1-child CL1-short / CL2-child CL2-short

     'The short child...' / 'The short children...'

In (2), the subject and verb show agreement with respect to the person of the subject (first-person or second-person singular, respectively). In (3), the noun and adjective agree in gender (class 2). This bifurcation has been called a difference between index (agreement of person, number, and gender features) and concord (agreement of case, number, and gender features)—cf. Wechsler and Zlatić (2003).

   In Bantu, person is found on verbal predicates, in line with Stassen's universal in (1). The sentences in (4) from Kinyarwanda show subject-verb agreement in first- and second-person plural.[2]

(4) a. *Mwe mw-agi-ye   ku i-duka.*
       2PL 2PL-go-PERF to CL5-store

       'All of you went to the store.'

    b. *Twe tw-agi-ye   ku i-duka.*
       1PL 1PL-go-PERF to CL5-store

       'All of us went to the store.'

   In (4), the plural pronouns *mwe* 'we' and *twe* 'you (plural)' trigger plural person agreement on the verb. This is typologically expected given Stassen's generalization. Interestingly, person morphology also appears in an typologically unexpected location: some post-verbal quantifiers show person agreement.[3] An example from Kinyarwanda in (5) shows the quantifier *–ese* 'all' agreeing in person with the subject pronoun *mwe* 'you (plural).'

(5) *Mwe mw-ese mw-agi-ye   ku i-duka.*
     2PL 2PL-all 2PL-PST.go-PERF to CL5-store

     'All of you went to the store.'

(6) *Mwe ba-gufi   mw-agi-ye   ku i-duka.*
     2PL CL2-short 2PL-PST.go-PERF to CL5-store

     'All you short ones went to the store.'

(7) **Mwe b-ose   mw-agi-ye   ku i-duka.*
     2PL   CL2-all 2PL-PST.go-PERF to CL5-store

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[2]The native speaker judgments for Kinyarwanda have been elicited by the author from Yohani Kayinamura, Oscar Kabera, and Hodari Muvunyi. All data presented, unless otherwise noted, is from Kinyarwanda.
   [3]This was first pointed out by Wechsler and Zlatić (2003).

Despite typological tendencies against this kind of agreement, the quantifier *–ese* 'all' agrees in person with the pronoun *mwe* 'you (plural), not the expected adjectival agreement found in (7).' Examples of DP-internal person agreement are also found in other Bantu languages, such as Zulu (Doke 1963), Swahili (Ashton 1949), and Shona (Fortune 1985). Explaining the distribution of person morphology on verbs and post-nominal quantifiers is the central aim of the current paper.

However, the situation is more complex; *–ese* 'all' is not the only determiner in Kinyarwanda. The language also has a non-agreeing quantifier *buri* 'every' and a class of distal and proximal determiners which agree in gender, e.g. *uyu* 'this (CL1).'

I will argue that the distribution of agreement morphology can be explained by virtue of the historical incorporation of pronouns onto specific syntactic positions, combining historical perspectives of the cliticization process with syntactic perspectives that view agreement as a relation between specific syntactic positions. This hybrid view makes better predictions than either the historical cliticization view or the synchronic configurational view can make in isolation. In essence, this approach combines the understood diachronic properties of person agreement with findings from synchronic syntactic theories of agreement.

Section 2 will outline the three kinds of determiners in Kinyarwanda and outline an explanation for a theory of agreement that can account for the different agreement properties of these three determiners. Section 3 will compare this approach to other approaches to Bantu agreement. Section 4 will conclude the present discussion and provide thoughts for extensions of this analysis.

2 Agreement in Kinyarwanda

Kinyarwanda (Rwanda) exhibits a variety of interesting patterns with respect to agreement within DPs. This includes a three-way distinction between agreement on determiners:

(8) *[Mwe mw-ese] mw-a-gi-ye   ku i-duka.*
    [2PL 2PL-all] 2PL-PST-go-PERF to CL5-store

    'You all go to the store.'   Person Agreement

(9) *[Buri mu-gabo] y-a-gi-ye   ku i-duka.*
    [every child]   CL1-PST-go-PERF to CL5-store

    'Every man went to the store.'   No Agreement

(10) *[Uyu   mu-gore] y-a-gi-ye   ku i-duka.*
    [this.CL1 CL1-woman] CL1-PST-go-PERF to CL5-store

    'This woman went to the store.'   Gender Agreement

The data in (8) - (10) show examples of the three different kinds of determiners in Kinyarwanda: *–ese* 'all' which agrees in person, *buri* 'every' which shows no agreement whatsoever, and *uyu* 'this' which agrees in gender.[4] The tasks at hand, then, is to explain the distribution of agreement on determiners in Kinyarwanda.[5]

2.1 A Diachronic Theory of Person Agreement

It has been suggested that agreement arises via cliticization, the process by which certain lexemes are reanalyzed as morphological subparts of another lexical category (Givón 1976, Greenberg 1978, Bresnan and Mchombo 1989, *inter alia*). Person agreement, specifically, arises historically from the cliticization of personal pronouns (Givón 1976, Bresnan and Mchombo 1989, Wechsler and Zlatić 2003, Coppock and Wechsler 2011). Over time, personal pronouns become clitics that are hosted on a verb or other category. In time they lose their referentiality and are reanalyzed as agreement morphemes.

However the prior literature does not provide an explanation for why person agreement appears on post-nominal quantifiers in Kinyarwanda and other Bantu languages.

Taking these approaches as a starting point, I propose the following criteria for the cliticization of person marking:

(11) *Person Agreement Hypothesis (PAH):* Personal pronouns may cliticize onto a head when that pronoun resides in the host's specifier position.

The PAH is an extension of previous theories of the historical development of agreement, though it crucially adds the stipulation—first proposed from a synchronic perspective by Chomsky (1986)—that there is a unique specifier-head relationship that restricts when person agreement may arise.

In other words, the PAH states that, in agreement with the previous literature, personal pronouns indeed cliticize over time; however, this

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[4]Evidence that each of these should be treated as a determiner comes from Baker (2008:184). These arguments will not be put forth here.

[5]As a sidenote, when the trigger of agreement on *–ese* 'all' is not a pronoun, *–ese* 'all' shows gender agreement:

(1) a. aba-kobwa   b-ose...
         CL2-women CL2-all

         'all the children...'

     b. in-ka   z-ose...
         CL7-cows CL7-all

         'all the cows...'

In (1), the quantifier *–ese* 'all' agrees in the noun class (i.e. gender) of the nominal trigger. Kinyarwanda has sixteen of these classes, which are based on the semantic features of the noun. The *–ose* form is an allomorph of *–ese* 'all.'

cliticization is not unrestricted. The PAH restricts the distribution of personal pronoun cliticization to a specifier-head relationship. It will be shown below that this addition to the explanation for the development of person agreement makes empirically accurate predictions for why person agreement in Bantu languages can both appear on verbs and certain post-nominal quantifiers.

2.2 Person Agreement on Quantifiers

The PAH predicts that person agreement will appear in situations in which personal pronouns appear in the specifier position of a head. For Kinyarwanda, the case study under discussion here, this includes verbs and the post-nominal determiner *–ese* 'all.' Cliticization of personal pronouns has been widely discussed in previous literature (see citations and discussion in Section 2.1) and will not be discussed in detail here. Post-nominal DP agreement, on the other hand, does not follow from previous approaches to agreement; person agreement on a determiner is not expected in these approaches.

The person agreement found on *–ese* 'all' contrasts with the non-agreeing quantifier *buri* 'every,' which does not show any agreement. I argue that this follows from the fact that the latter does not have, crucially, any pronominal material in specifier position.

In what follows, I will show that the DP structures for *–ese* 'all' and *buri* 'every' are systematically different, based on the differing syntactic behavior of the two determiners. After establishing these structures, I will show that the PAH in (11) can account for why person agreement appears on the DP *–ese* 'all' and not on *buri* 'every.'

First, *buri* cannot appear without a complement NP; *–ese*, on the other hand, can appear alone. This contrast is shown in (12) - (13).

(12) a. *Buri mw-ana a-jy-e   ku i-duka.*
       every CL1-child CL1-go-PERF to CL5-store

       'Every child goes to the store.'

    b. **Buri a-jy-e   ku i-duka.*
       every 1-go-PERF to CL5-store

(13) a. *mwe mw-ese mu-jy-e   ku i-duka.*
       2PL 2PL-all 2PL-go-PERF to CL5-store

       'All of you go to the store.'

    b. *mw-ese mu-jy-e   ku i-duka.*
       2PL-all 2PL-go-PERF to CL5-store

       'All of you go to the store.'

These data show that *buri* 'every' cannot appear without the noun *mwana* 'children;' it requires an NP complement. The determiner *mw-ese* '2PL-

all,' on the other hand, can appear without the pronoun *mwe* 'we.' This suggests that *buri* 'every' takes an NP complement, whereas *–ese* 'all' does not.

A further difference between the two is that *–ese* 'all' can float away from other material in the DP. *Buri* 'every' cannot be severed from its complement NP.

(14) *Abana   ba-gi-ye   ku i-duka   b-ose.*
      CL2-child CL2-go-PERF to CL5-store CL2-all

      'All the children went to the store.'

(15) **mw-ana a-gi-ye   ku iduka   buri.*
      1-child   1-go-PERF to CL5-store every

In (14), the quantifier *b-ose* 'CL2-all' is moved to the end of the sentence, separated from the NP *abana* 'children.' In (15), the quantifier *buri* 'every' cannot be separated from the NP in the same manner.

These data show that the person-agreeing quantifier *–ese* 'all' can be floated , while the non-agreeing quantifier *buri* 'every' cannot. This is further evidence that the quantifier *buri* 'every' takes an NP complement, while *–ese* 'all' does not. Specifiers are optional in Kinyarwanda, as shown by Zeller (2008a) for subjects in specifier position, paralleling the data in (11) (14).[6]

The selectional difference between *–ese* 'all' and *buri* 'every' suggests that the two have distinct DP structures. The DP which contains the determiner *–ese* 'all,' the pronoun *mwe* 'you.PL' must appear in specifier position due to the fact that it is not a complement of the head *–ese* 'all,' as shown in (16).[7]

(16)

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                    DP
                   /  \
                 DP     D′
                /  \     |
              mwe     D
              2.PL   mw-ese
                     2.PL-all
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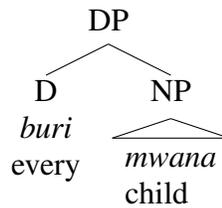
The DP structure for the determiner *buri* 'every' must have the noun as a complement to the determiner, which is illustrated by the data above. The structure in (17) gives a schematization of this tree:

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[6]See also Zeller (2008b) for discussion of subject markers in Bantu.
[7]Note that pronouns are treated as distributionally equivalent to DPs (see Baker (2008) for discussion).

(17)

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              DP
            /    \
          D       NP
        buri      /\
        every  mwana
                child
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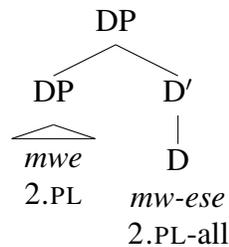This structure indicates that an NP must be taken as a complement of the determiner head *buri* 'every.' Furthermore, the head does not project a specifier position.
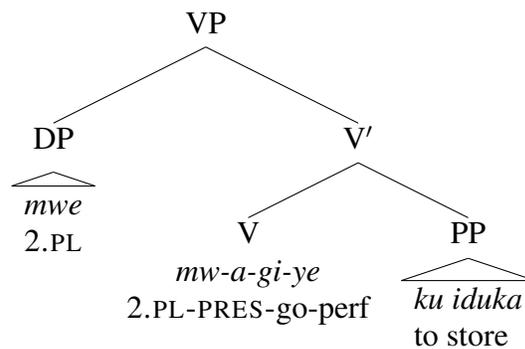
Returning to the theory of agreement, I assume that the cliticization of personal pronouns onto other lexical categories is only possible when the lexical category is the head of the phrase, as stated in the PAH. In sum, personal pronouns are only able to cliticize when they are in the specifier position of a phrase.

This specifier-head relationship for the cliticization of personal pronouns predicts that, due to the shape of Kinyarwanda DPs, person agreement should appear on both post-nominal determiners and verbs. Namely, these are the two configurations (and—crucially—the only two) in the language where a personal pronoun appears in specifier position, as shown in (18) - (19).

(18)

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              DP
            /    \
          DP      D′
          /\      |
        mwe       D
        2.PL    mw-ese
                2.PL-all
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(19)

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                    VP
                 /      \
               DP        V′
               /\       /  \
             mwe       V     PP
             2.PL   mw-a-gi-ye  /\
                  2.PL-PRES-go-perf  ku iduka
                                     to store
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In (18) and (19), the pronoun *mwe* 'you.PL' is in the specifier position of either a DP or VP head. Given the PAH, it is expected that this configuration would permit the cliticization of the personal pronoun onto the determiner or verbal head as a phonologically reduced person agreement marker.

27

2.3 Gender Agreement in Kinyarwanda

In addition to the determiners *buri* 'every' and *–ese* 'all,' Kinyarwanda has a third category of determiners, i.e. those that agree in gender with the head noun. Kinyarwanda has sixteen gender classes, which are semantically distinct and encode concepts like "human" or "places." There are distal and proximal determiners in the language that agree in gender with the noun they modify. Take, for example, the data in (20).

(20) a. *ubu   bw-ato... / ubwo   bw-ato...*
          CL14.this CL14-boat / CL14.that CL14-boat
          'this boat... / that boat...'

     b. *iyo   n-zovu...   / iyi   n-zovu...*
          CL9.this CL9-elephant / CL9.that CL9-elephant
          'this elephant... / that elephant...'

A theory of agreement in Kinyarwanda must be able to account for this separate kind of agreement on determiners.

Building on ideas that concord agreement (i.e. gender agreement) arises historically from noun classifiers (Greenberg 1978, Corbett 2006), I assume the proposal in (21):

(21) *Gender Agreement Hypothesis (GAH):* Class markers cliticized historically onto any category in the specifier, complement, or adjunct positions in the DP.

This proposal claims that gender agreement arose from the cliticization of class markers, which I posit to have originally been in the D head position. I propose the diagram in (22), which shows where the historical position of the class marker would appear and each position to which the gender feature is assumed to have spread.

(22) Pre-Kinyarwanda
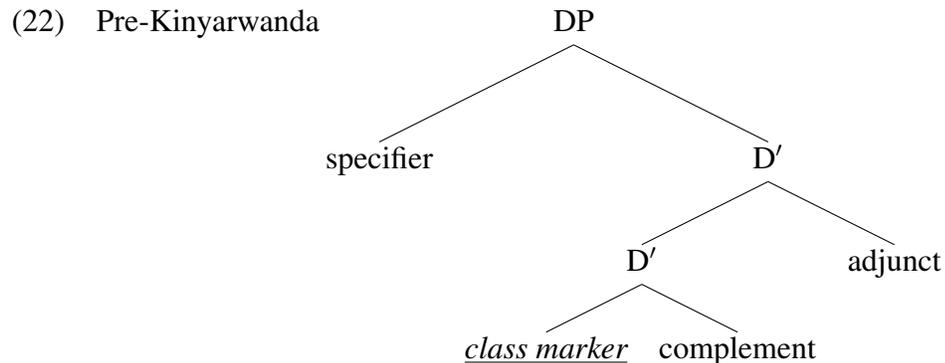
This tree illustrates the proposal that the DP head was formerly a class marker (the understood origin of gender agreement, cf. Lehamann (1988)) that, over time, spread to all other structural positions in the phrase.

28

This proposal predicts that gender agreement will have spread to all other lexical categories within the DP: specifiers, complements, and adjuncts. The data in (23) show that this prediction is born out in Kinyarwanda; gender agreement appears in each of theses syntactic positions within the DP.

(23) a. *uyu   mw-ana   mu-to   wa   Marie...*
CL1.this CL1-child CL1-small CL1.of Marie

'this small child of Marie's...

b. *aba   ba-na   ba-to   ba   Marie...*
CL2.these CL2-child CL2-small CL2.of Marie

'these small children of Marie's...'

c. *iki   gi-tabo   gi-to   cya   Marie...*
CL7.this CL7-book CL7.of Marie

'this small book of Marie's...'

d. *ibi   bi-tabo   bi-to   bya   Marie...*
CL8.these CL8-books CL8.of Marie

'these small books of Marie's...'

The examples in (23) show that determiners, nouns, adjectives, and prepositions all show gender agreement.

Each of these lexical categories relates to a syntactic position in the proposed "Pre-Kinyarwanda" structure in (22); the determiner was the specifier, the noun was in complement position, and the prepositions and adjectives would have been adjuncts.

Recall that *buri* 'every' does not show gender agreement. I proposed above that gender agreement arose from a class marker, and the natural position for this is as the determiner—the DP head. Following from the fact that the historical class marker and *buri* 'every' are both analyzed as determiners, the two would be in complementary distribution. Due to this complementarity of *buri* and the now non-existent class markers, *buri* would never have been adjacent to the class marker. Therefore, it would have never been a candidate for hosting cliticization. Hence, *buri* is unable to show gender agreement.

The GAH in (21), then, makes accurate predictions regarding where gender agreement may appear within the DP.

2.4 Summary of the Proposed Theory of Agreement

The present proposal makes a variety of critical distinctions to explain the distribution of agreement in synchronic Kinyarwanda. First, it assumes that gender and person arose similarly through historical cliticization. However, the syntactic restrictions on gender and person cliticization must be nuanced; the two do not develop in the same way.

Person agreement is more restricted, and I have proposed that cliticization arises when a personal pronoun appears in specifier position (per the PAH). This gives rise to the presence of person agreement on verbs and certain determiners in Kinyarwanda.

The GAH predicts that gender agreement is more unrestrained, spreading from the head of the DP to all possible syntactic positions within the DP.

3 Comparison with Other Theories of Agreement

I now turn to the comparison between the current proposal and two previous theories of agreement in order to show that the current theory makes better empirical predictions than the previous accounts.

3.1 Historical Incorporation through Adjacency

The first comparison I will make to previous approaches to agreement is what I will broadly call the "adjacency" approaches, which is what is tacitly assumed in large variety of works, such as Givón (1976) and Bresnan and Mchombo (1987). These approaches propose that person agreement arises through historical incorporation of personal pronouns—a central tenet of the current theory. The crucial point of departure between the current approach and these previous approaches is that the present proposal refines this cliticization to specific syntactic relationships, per the PAH.

The current proposal's addition to the view found in previous adjacency approaches makes empirically better predictions for the data in Kinyarwanda. The adjacency view predicts that person agreement would appear on DP-internal adjectives, which can appear adjacent to the noun; namely, the pronoun would have cliticized to any element to its right

The data in (24a) - (24b) show that this is not the case. In (24a), the personal pronoun does not trigger person agreement on the adjective.

(24)   a. *Mwe <u>ba</u>-gufi   mw-agi-ye   ku i-duka.*
           2PL   CL2-short 2PL-PST.go-PERF to CL5-store

           'You short ones went to the store.'

        b. *Mwe <u>mw</u>-ese mw-agi-ye   ku i-duka.*
           2PL   2PL-all 2PL-PST.go-PERF to CL5-store

           'All of you went to the store.'

In (24a), the adjective –*gufi* 'short' shows gender (class 2, for plural human); the determiner in (24b) is the post-nominal quantifier –*ese*, which agrees in person with *mwe* 'you.PL.'

A theory that relegates person agreement to the cliticization of adjacent personal pronouns cannot explain the lack of person agreement on the adjectives in (24a); both the person-agreeing quantifiers and gender-agreeing adjectives can appear in this position, which means there is more to the story than simple adjacency of lexical items.[8]

3.2 Minimalist Theory of Agreement

The analysis proposed here shares some of its fundamental insights with Baker (2008), though it departs from it in many ways. Baker (2008) focuses mainly on the putative universal in (1), though he also offers a brief suggestion for dealing with Bantu DP-internal person agreement (Baker 2008:184-189). Although he provides some crucial insights into this phenomenon in Bantu, his analysis is ultimately empirically inadequate with respect to DP-internal agreement in Bantu.

3.2.1 Summary of Baker's Analysis

Baker's (2008) analysis is based on structural properties of verbal and adjectival phrases and their capacity to show various kinds of agreement. The crux of the theory is based on the syntactic configuration given in (25), which defines where person agreement may appear based on syntactic properties of the phrase:

(25)   *The Structural Condition on Person Agreement (SCOPA)*
A category F can bear the features +1 or +2 if and only if a projection of F merges with a phrase that has that feature and F is taken as the label of the resulting phrase.   Baker (2008:52)

For a target to agree in person with a nominal, that nominal must appear in the target's specifier or complement position. Baker's (2008) theory prohibits adjectives to agree in person with a noun because APs lack a specifier position that the noun can occupy. Verbs, on the other hand, can agree in person with nouns because they project a specifier position which the controller noun may occupy. Baker's theory predicts that determiners should be able to agree in person with a complement because the determiner directly merges with its complement, which contains φ-features.

Both the present analysis and that of Baker (2008) emphasize the relationship between heads and their specifiers with respect to person agreement. The difference between the analyses is that the present analysis folds this notion into the historical evolution of agreement. Further-

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[8]One alternative, suggested by Patience Epps (*personal communication*), is that the distinction in (24) could be due to a frequency effect with respect to the likelihood of the juxtaposition of pronouns and determiners/adjectives. This proposal will not be pursued here, though it may prove to be a relevant factor for future applications of this theory.

more, the current analysis posits two separate mechanisms for person and gender agreement (cf. the PAH and GAH, above), whereas Baker's analysis attempts to have both follow from similar agreement universals.

A crucial point of departure is the theory of gender agreement in Bantu. Baker posits a parameter that restricts all agreement in Bantu languages:

(26)   *The Direction of Agreement Parameter (Set for Bantu)*
       F agrees with DP/NP iff DP/NP asymmetrically c-commands F.

This parameter is based on phenomena in a variety of Bantu languages, and claims that F (the functional head that bears agreement features) must be asymmetrically c-commanded by the controller DP/NP. I will show that this parameterization makes an empirically inaccurate prediction for Bantu, and I will furthermore show that the current analysis can account for the data presented in Baker (2008).

3.2.2   Empirical Differences

The parameter in (26) predicts that all targets of agreement will follow the controller. This predicts that no pre-nominal determiner should exist in Bantu that contains agreement features, which is not the case. Data from Kinyarwanda and Shona (Bantu, Zimbabwe) show that pre-nominal agreement indeed exists in these languages.

(27)   a.   *aba   ba-ntu   b-ose*
            these.CL2 CL2-people CL2-all
            'all these people'

       b.   *ibyo   bi-ntu   by-ose*
            these.CL8 CL8-things CL8-all
            'all these things'

       c.   *iyo   my-aka   y-ose*
            these.CL4 CL4-years CL4-all
            'all these years'   Kinyarwanda

(28)   *ava   va-na   v-ose*
       CL2.these CL2-children CL2-all
       'All these children...'   Shona, from Myers (1987:75)

These data show clear examples of pre-nominal determiners that agree in gender with the head noun. These data serve as critical counter-examples to the parameter proposed in (26) due to the fact that no pre-nominal agreement should be possible in Bantu according to this parameter setting.

There are a variety of other data points Baker discusses for Bantu languages based on his theory in (26). Each of these points is shown to be explained equally well by the current theory.

One such datum, from Kinande (Bantu, Democratic Republic of Congo), is from agreement on focus constructions. When the complementizer appears after the NP in a focus construction, there is agreement, as in (29a). When a question word occurs before the NP, it cannot agree with the NP, as in (29b).

(29)   a. *[Ebi-hi   by-o   Kambale a-gul-a   ].*
            CL8-what CL8-FOC Kambale 1S/T-buy-FV

           'What did Kambale buy?'   Baker (2008:181)

      b. *[Uti/*bi-ti] Kambale   a-gul-a   [ebi-hi]?*
            Q/CL8-Q   Kambale.1 1S/T-buy-FV CL8-what

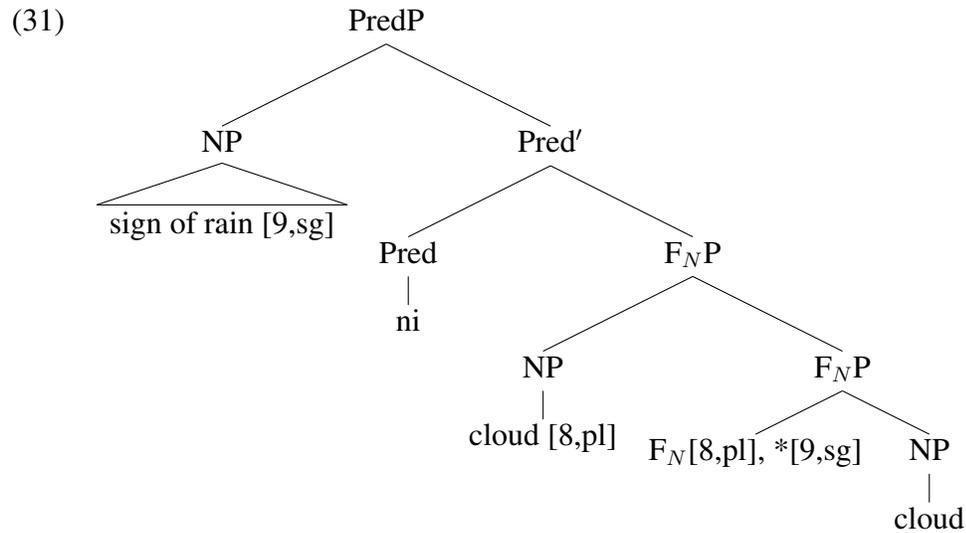   'What did Kambale buy?'   Baker (2008:182)

The sentence in (29a) is a focus construction where a C-like particle appears after the fronted noun *amatunda* 'fruits' and agrees in class with the the fronted NP. The question word in (29b) shows the question word without gender agreement: *uti*.

The analysis above makes equally viable predictions for this construction. Given that the focused C is relativized under the NP, it is unsurprising that it shows gender agreement; all DP-internal arguments can show gender agreement under the current theory.

The question marker naturally does not show agreement because it does not occur inside the DP. As a question marker, it is distributionally equivalent to the DP. Under this perspective, it is unsurprising that the question word does not show agreement; something that is distributionally equivalent with a phrase could never occur inside of it. Under the current analysis, this predicts that the noun classifier could not have spread to question markers that replace the DP.

Baker himself notes an area in which this c-command relationship may not necessarily hold. Under his theory, predicate nominals should not be able to show agreement with F_N because the NP does not c-command the F_N head, given the structural properties he outlines for the F_NP phrase. The datum in (30), from Swahili, shows a predicate nominal *mawingu* 'clouds,' which does not agree with the subject nominal *dalili* 'sign,' as expected given (26).

(30)   *Dalili   y-a   mvua   ni   ma-wingu.*
        CL9.sign CL9-ASSOC CL9.rain PRED CL8-clouds

      'Clouds are a sign of rain.'   Baker (2008:188), citing Ashton (1949)

(31)

PredP
- NP
  - sign of rain [9,sg]
- Pred′
  - Pred
    - ni
  - F$_N$P
    - NP
      - cloud [8,pl]
    - F$_N$P
      - F$_N$[8,pl], *[9,sg]
      - NP
        - cloud

The analysis proposed here does not face this problem. Agreement features are not assigned via functional heads; instead they are inherently featured in noun phrases. Because the two controllers are in separate DPs in (30), the present analysis does not expect gender to be forced to agree outside of local NP/DPs.

Baker's final piece of evidence comes from locative inversion constructions in Chicheŵa (Bantu, Malawi), which force the verb to agree with the fronted locative instead of the theme:

(32) a. *Chi-tsîme chi-le   ku-mu-dzi.*
         CL7-well CL7-be CL17-3-village

         'The well is in the village.'

      b. *Ku-mu-dzi   ku-li   chi-tsîme.*
         CL17-3-village CL17-be CL7-well

         'In the village is a well.'   Baker (2008:158)

In (32a), the subject of the sentence is class 7 and agrees in gender with the verb. In (32b), the location is fronted to a preverbal position, and the verb agrees in class with the locative noun and,crucially,not the underlying subject. This suggests that the verb agrees with the noun that precedes it.

It is clear, then, that there is a synchronic effect in Bantu languages where the DP in the specifier position triggers agreement, which fits precisely with the rechristening of specifier-head relationships in Bakers as the PAH above. The Chicheŵa data fit naturally into the current framework as well as Baker's.

Overall, Baker's theory makes certain accurate empirical predictions, though his analysis cannot account for pre-nominal determiners that show

gender agreement. Furthermore, he must make certain stipulations to explain the Swahili data in (30). These points, as well as Baker's data on locative inversion in Chicheŵa, are naturally explained by the current theory.

4 Conclusion

This paper has provided an analysis of person agreement in the Bantu language Kinyarwanda that can account for the seemingly anomalous appearance of person morphology on post-nominal quanitifers.

The approach outlined here combines intuitions from both historical and synchronic approaches to the distribution of agreement, focusing exclusively on a subset of Bantu languages. I have proposed two hypotheses: one for the historical cliticization of person agreement (the PAH), and one for the cliticization of gender agreement (the GAH). The former hypothesizes that person agreement will arise when a personal pronoun is projected in the specifier position of either a DP or VP; the latter predicts that gender agreement will spread to all positions within a DP.

By mixing synchronic and diachronic perspectives, it becomes clear that the seemingly anomalous phenomenon of DP-internal person agreement in Bantu follows from widely understood properties of agreement phenomena.

Future work would ideally show that the two hypotheses outlined here can also account for the distribution of person and gender across the world's languages. Furthermore, the current discussion has largely ignored the distribution of number features, which might play critically into the agreement systems of languages outside Bantu.

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